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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,046

04/21/2005

Shoichiro Shimoike

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65565 7590 11/12/2008  
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EXAMINER

PHAN, THIEM D

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

11/12/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,046	<b>Applicant(s)</b> SHIMOIKE, SHOICHIRO	
	<b>Examiner</b> THIEM PHAN	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3,4/2,4/3 is/are allowed.
- 6) ☒ Claim(s) 1,4/1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 10/21/08 has been entered.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

On page 1, before "BACKGROUND OF THE INVENTION", insert:

"CROSS-REFERENCE TO RELATED APPLICATION

This application is the U.S. National Phase under 35 U.S.C. 371 of International Application PCT/JP03/13143, filed 10/14/03, which claims priority to Japanese Patent Application No. 2002-305941, filed 10/21/02."

See Patent Rule 1.78(a) and provide appropriate correction.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1 and 4/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art, hereinafter AAPA, in view of Suzuki Yasuo (JP 2001-230567).

**Regarding claim 1**, AAPA teaches a process of arranging the multishaft servo-amplifier modules of identical shape (Fig. 10, 93) and an identical function to each other and has semiconductor power elements (Page 3, lines 23-26), which reads on applicants' claimed invention, comprising:

- preparing a multishaft interface substrate, that constitutes a multishaft servo-amplifier function unit for a host controller (Page 4, line 9), as a base plate (Fig. 10, 91) on which the plurality of multishaft servo-amplifier modules (Fig. 10, 93) are mounted; wherein each of the plurality of multishaft servo-amplifier modules including a printed board (103) and a semiconductor power element (Page 3, lines 24 & 25) carried on the printed board;
- mounting the multishaft servo-amplifier modules on surfaces of the multishaft interface substrate in parallel (Fig. 10, 93) therewith; except for mounting the multishaft servo-amplifier modules each in parallel and on the both surfaces of the multishaft interface substrate.

Suzuki Yasuo teaches an electronic circuit case where the electronic circuits (Fig. 2, 5) are arranged each in parallel and on both surfaces of the printed circuit board (Fig. 2, 4) in order to improve the packaging strength and density of the electronic circuitry (Paragraph 17, last line).

It would be obvious to one of ordinary skill in the art at the time invention was made to modify the method of AAPA by providing the two sides structural arrangement of electronic components each in parallel with the PCB, as taught by Suzuki Yasuo and not its original

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devices, in order to improve the packaging strength and density of the multishaft servo-amplifier modules in parallel and on both surfaces of the multishaft interface substrate.

**With regard to claim 4/1**, AAPA teaches a process of arranging the multishaft servo-amplifier modules of identical shape (Fig. 10, 93) and identical function to each other and having semiconductor power elements (Page 3, lines 23-26) on a base plate (Fig. 10, 91) of a movable part of a machine (Paragraph 2), which reads on applicants' claimed invention; except for mounting the multishaft servo-amplifier modules on their most flat structural modules to decrease the thickness of the system.

Suzuki Yasuo teaches an electronic circuit case where the electronic circuits (Fig. 2, 5) are arranged at their utmost flat structural devices on both surfaces of the printed circuit board (Fig. 2, 4) in order to improve the packaging density of the electronic circuitry (Paragraph 17, last line).

It would be obvious to one of ordinary skill in the art at the time invention was made to provide AAPA with the two sides structural arrangement of electronic components at their utmost flat structural devices, as taught by Suzuki Yasuo and not its original devices, in order to improve the packaging density of the multishaft servo-amplifier modules on both surfaces of the multishaft interface substrate without increasing the thickness of the system.

#### *Allowable Claims*

5. Claims 2, 3, 4/2 and 4/3 are allowed.

***Response to Arguments***

6. Applicant's arguments filed 10/21/08 and 9/12/08 have been fully considered but they are not persuasive for the following reasons:

With respect to the Cross-Reference (Remarks on 9/12/08; Page 8, section Specification), it appears that the applicant does not want the Claimed Priority Date, therefore the applicant must request the withdrawal of that Priority but the examiner wants the applicant to take a second look at this critical option as that Priority is formally applied on 4/21/05 in the Transmittal of New Application or FRPR Document and acknowledged by the Office on 10/18/05. Furthermore, a Claimed Priority Date Withdrawal will trigger further search and automatic Final Office Action from any potential prior art unaccounted for during that period/window of Claimed Priority Date.

Regarding the remarks on pages 9 and 10 about the parallel and two sides mounting of the servo-amplifier modules on the PCB, the applicant assert that there is no parallel mounting structure. In response to applicant's argument, Suzuki Yasuo does teach the parallel and two sides mounting of the electronic circuits (Fig. 2, 5) and it would be obvious to apply that bodily mounting structure to the method of arranging the servo-amplifier modules of AAPA in order to improve the packaging strength and density of the multishaft servo-amplifier modules in parallel and on both surfaces of the multishaft interface substrate. Therefore, AAPA in view of Suzuki Yasuo at a minimum teach the claimed invention.

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***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M & Tu, 6AM - 2PM, and W & Th, 9AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Phan Thiem/  
Examiner, Art Unit 3729

November 7, 2008